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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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John H. Oates

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08/09/2005

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EXAMINER

GHULAMALI, QUTBUDDIN

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/099,923	Applicant(s) OATES, JOHN H.	
	Examiner Qutub Ghulamali	Art Unit 2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 22 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-20 is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 07/22/2005, in response to the office action dated March 22, 2005.
2. Applicant's Amendment to claims 11-15, dated 07/22/2005, is hereby acknowledged.

Response to Arguments

3. Applicant's arguments filed 07/22/2005 with respect to claims 1-6 and 7-10, has been considered but are moot in view of the new ground(s) of rejection necessitated by the applicant's amendment.

The applicant's Remark/Argument beginning pages 10-12, regarding claims 1-6, 7-10, have been fully considered but are not persuasive. The applicant asserts that Naruse fail to teach the functionality of claims 1 and 7, namely calculating a matrix representing correlation among code sequences associated with respective users. On the contrary, Naruse discloses signals are received through multi-paths the fingers 25A, 25B, and 25C multiply (calculates) the signals received through the multi-paths by the PN code so as to de-spread the received signals and in addition, the fingers 25A, 25B, and 25C output the levels of the signals received through the multi-paths and the frequency errors of these multi-paths. The searcher 28 acquires the codes of the received signals and designates the codes for the paths, in other words, the searcher 28 has a de-spreading circuit that multiplies the received signals by the respective PN codes and de-spreads the received signals. The searcher 28 shifts the phases of the PN codes under the control

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of a controller 29 and *obtains the correlation with the received codes. With the correlation values of the designated codes and the received codes, the codes for the respective paths are Designated*, the codes designated by the controller 29 are supplied to the fingers 25A, 25B, and 25C (col. 7, lines 23-40). Therefore, in light of the above explanation, the examiner concludes that Naruse discloses the limitations of the claimed subject matter as claimed. Accordingly, **THIS ACTION IS MADE FINAL.** Please refer to the following rejections under **35 USC § 102(b)**.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-10 is rejected under 35 U.S.C. 102(b) as being anticipated by Naruse et al (USP 6,014,408).

Regarding claims 1 and 7, Naruse discloses a spread spectrum system processes a plurality of waveforms transmitted by respective users, the system comprising:
two registers (multiple) associated with l^{th} and k^{th} users each for storing elements of a code sequence associated with one of the l^{th} and k^{th} users, an alignment of the code sequence loaded in one register being shifted relative to that of the other register by m elements (col. 3, lines 49-65; col. 4, lines 46-65; col. ,
two further registers, each for storing mask sequences associated with the code sequences of a respective one of the l^{th} and k^{th} users, such that a mask element is zero or non-zero if a

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corresponding element of the associated code sequence is zero or non-zero, respectively, an alignment of the mask sequence in one of the further registers being shifted relative to those in the other of the further registers by m elements (col. 4, lines 6-37; col. 5, lines 1-26), a logic unit (XOR(306), AND(305A-E)) coupled to said registers for performing an arithmetical operation on said code sequences and mask sequences to generate, for m^{th} transmitted symbol, (l, k) element of a matrix that represents correlations among the code sequences associated with the respective users (col. 10, lines 30-67).

Regarding claims 2, 8, Naruse discloses arithmetical operation comprises obtaining a sum of multipliers of non-zero aligned elements of the code sequences (col. 8, lines 16-45).

Regarding claims 3, 4-5, 9 Naruse discloses:

- (i) performing an XOR operation between the code elements (col. 4, lines 46-55),
- (ii) performing an AND operation between the mask elements (col. 4, lines 24-30),
- (iii) performing an AND operation between results of the step (i) and step (ii) to generate a multiplier corresponding the aligned elements (col. 10, lines 63-67; col. 11, lines 1-5), and
- (iv) summing the multipliers to generate the (l, k) element of the matrix (col. 12, lines 9-12).

As per claim 6, Naruse discloses storage for storing the computed matrix representing correlations among the code sequences associated with the users (abstract; col. 3, lines 49-65).

As per claim 10, Naruse discloses storing the matrix in persistent memory (col. 8, lines 46-64).

Allowable Subject Matter

6. Claim, 11-15 and 16-20 allowed.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (571) 272-3014.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QG.

August 2, 2005.

A handwritten signature in black ink, appearing to read "J. K. Patel", is written over a horizontal line.

JAY K. PATEL
SUPERVISORY PATENT EXAMINER